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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SHAKER A. MOUSA

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Appeal 2010-003549  
Application 10/667,216  
Technology Center 1600

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Before LORA M. GREEN, FRANCISCO C. PRATS, and  
JEFFREY N. FREDMAN, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING<sup>1</sup>

Appellant has requested rehearing (reconsideration) of the decision entered September 29, 2010.<sup>2</sup> That decision affirmed the Examiner's rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a).

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

<sup>2</sup> Administrative Patent Judge Carol A. Spiegel authored the decision of September 29, 2010 (*see* Dec. 1), but was not available for this rehearing request.

Appellant's request has been granted to the extent that the decision has been reconsidered, but such request is denied with respect to making any modifications to the decision affirming the Examiner's rejections.

#### DISCUSSION

Appellant "asserts that the burden of proof as to whether or not the chemical structures of Naggi's supersulfated heparin fractions have the claimed functional characteristic (i.e., full inhibition of angiogenesis) should not be shifted to Appellant" (Req. Reh'g. 9). Appellant argues that

- i) the chemical structure of Naggi's supersulfated heparin fractions are not virtually identical to the chemical structure of the supersulfated heparin fractions recited in claim 1, because Naggi does not expressly or inherently teach that a mixture of sulfuric acid and chlorosulfonic acid oxidizes heparin or heparin fractions;

- ii) it is unfair to shift the burden of proof to Appellant; because Appellant is an individual with limited resources who does not have the ability to manufacture products or to obtain and compare prior art products, especially since the Examiner has the burden of proof to begin with; or

- iii) the claimed functional characteristic (i.e., full inhibition of angiogenesis) should be interpreted as a limitation that further limits the claimed structural feature to fewer super-sulfated oxidized heparin fractions than is recited in the claimed structural feature, so that the claimed structural feature is a necessary but not sufficient condition for the claimed functional characteristic to be satisfied, which removes inherency of the claimed functional characteristic as an issue.

(Req. Reh'g. 10.)

We have reviewed our Decision in light of these arguments. However, we are not persuaded that our Decision was in error.

In our decision, we relied upon the Examiner's finding that chlorosulfonic acid was a known oxidizing agent, and that this agent was added to heparin (Dec. 8; FF 5; also *see* Ans. 6). Appellant implicitly acknowledges that sulfuric acid and chlorosulfonic acid are known oxidizing agents, but contends that "[n]either sulfuric acid nor chlorosulfonic acid nor any other reactant is capable of oxidizing every existing substance on Earth" (Req. Recons. 3). We are not persuaded by this argument in light of the evidence. All that claim 1 requires is "[a]n oxidized heparin fraction". No specific amount or degree of oxidation is required, nor is any specific mode of oxidation required. Appellant's Specification states that "[o]xidation of heparin fractions in accordance with the present invention can be achieved using oxidizing agents" (Spec. 8 ¶ 0026; also *see* Dec. 7, FF 1). Naggi teaches treatment of heparin with an oxidizing agent, including chlorosulfonic acid (Dec. 8, FF 5). The issue is not whether chlorosulfonic acid can oxidize any substance on Earth, but rather whether treatment of heparin with this oxidizing agent will inherently result in some oxidation of the heparin.

We remain persuaded that the Examiner has reasonably shifted the burden to Appellant to demonstrate that Naggi's heparin treated with an oxidizing agent is not oxidized (Dec. 7-8, FF 1, 5). *See In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) ("Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.").

Appellant's second argument, that it is unfair to shift the burden because Appellant has limited resources, is not persuasive. The entire point of this particular burden shift is that as "a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535 (CCPA 1972). Appellant has provided no clear or direct evidence to rebut the conclusion that Naggi's modified heparin is inherently identical to that claimed.

Appellant's third argument is that "it is unreasonable to assume that any structure satisfying the claimed structural feature would inherently satisfy the claimed functional characteristic" (Req. Reh'g. 9). We are also not persuaded by this argument, which lacks any evidentiary support. "[A]fter the PTO establishes a prima facie case of anticipation based on inherency, the burden shifts to appellant to 'prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.'" *In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986) *quoting In re Swinehart*, 439 F.2d 210, 212-13 (CCPA 1971). Appellant has not provided any rebuttal evidence.

Appellant relies upon the same arguments for claims 93, 2, 5, and 6 (*see* Req. Reh'g. 11). We are not persuaded for the reasons given above.

Appellant argues that "the [b]oard is under a *misapprehension* that the preceding argument by the Examiner that Naggi teaches treating heparin with sulfuric acid and chlorosulfonic acid to depolymerize and super-sulfate heparin inherently teaches" steps of claim 94 (Req. Reh'g. 12). Appellant argues that the "Examiner's [a]nswer has not provided scientific evidence to

prove the Examiner's alleged inherency as explained *supra*" (Req. Reh'g. 12).

We are not persuaded for the reasons given above. We find that the Examiner properly shifted the burden to Appellant as discussed in the Decision (Dec. 15).

Appellant argues that for "inherency *under 35 U.S.C. § 103(a)*, however, an additional element is required to establish inherency, namely that the inherency must be known" (Req. Reh'g. 15). Appellant argues that

inherency cannot be used to reject a claim under 35 U.S.C. § 103(a) if the inherency is unknown in the prior art. *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753,756-57 (C.C.P.A. 1977) (reversing the Board's rejection of a claim based on alleged inherency under 35 U.S.C. 103 of a method to curb appetite, and stating: "[t]he inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. *Obviousness cannot be predicated on what is unknown*")

(Req. Reh'g. 15-16).

Appellant's reliance on *Shetty* is misplaced. In *Shetty*, the court reviewed the Patent Office's obviousness rejections of claims directed to a composition and a method of using the composition. *In re Shetty*, 566 F.2d at 84-85. With respect to the composition claims, the court affirmed the rejection where the Patent Office found a structural similarity to the claimed composition, stating:

Confronted with PTO evidence of obviousness, appellant has offered no evidence of unobviousness, as by showing an actual difference in properties between his compounds and the prior art compounds.... Presented with such an absence of comparative or other evidence with respect to the

properties of the compounds and the claimed composition, we hold that composition claim 52 would have been obvious from and unpatentable over the prior art.

*In re Shetty*, 566 F.2d at 86 (citation omitted). With respect to the method claims, the court reversed the obviousness rejection. However, this reversal was based on the improper reliance on a dosage for combating microbial infestation to show a dosage for curbing appetite. (*Id.*). Appellant's arguments are unpersuasive because the rejection before us is similar to the affirmed rejection of the composition claims before the court in *Shetty*.

Appellant also argues that "the Board *overlooked* Appellant's argument explaining why full inhibition of FGF2 induced angiogenesis is an unexpected result" (Req. Reh'g. 17).

Appellant points to page 21 of the Appeal Brief, but page 21 of the Appeal Brief addresses the anticipation rejection over Naggi, not an obviousness rejection. Appellant does not make this argument regarding the obviousness rejection in the Appeal Brief or in the Reply Brief. Therefore, this new argument shall not be considered in this request for rehearing. 37 CFR § 41.52(a)(1)(2009).

#### SUMMARY

We have carefully reviewed the original opinion in light of Appellant's request, but we find no point of law or fact which we overlooked or misapprehended in arriving at our decision. To the extent relevant, Appellant's request amounts to a reargument of points already considered by the board.

Appeal 2010-003549  
Application 10/667,216

Therefore, Appellant's request has been granted to the extent that the decision has been reconsidered, but such request is denied with respect to making any modifications to the decision affirming the Examiner's rejection under 35 U.S.C. § 102(b) and under 35 U.S.C. § 103(a).

DENIED

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